```
=> file casreact
FILE 'CASREACT' ENTERED AT 12:53:40 ON 24 SEP 2007
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FILE CONTENT:1840 - 22 Sep 2007 VOL 147 ISS 14

New CAS Information Use Policies, enter HELP USAGETERMS for details.

*************************************************************
*                                                           *
*     CASREACT now has more than 12 million reactions       *
*                                                           *
*************************************************************

Some CASREACT records are derived from the ZIC/VINITI database (1974-1999)
provided by InfoChem, INPI data prior to 1986, and Biotransformations
database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance
identification.

=> d stat que L12
L1                STR
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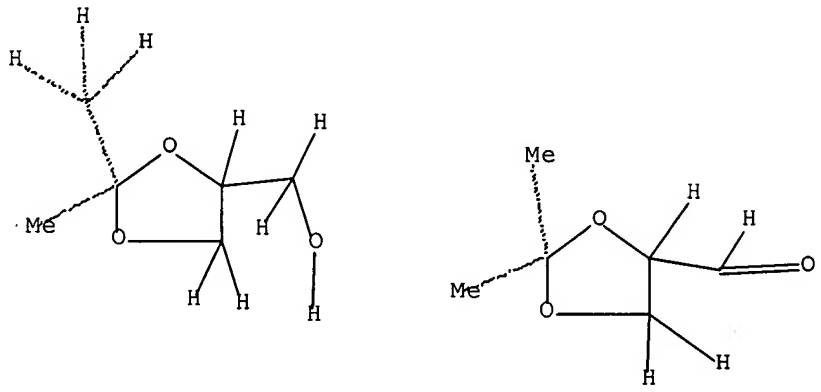


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Structure attributes must be viewed using STN Express query preparation:
Uploading L1.str
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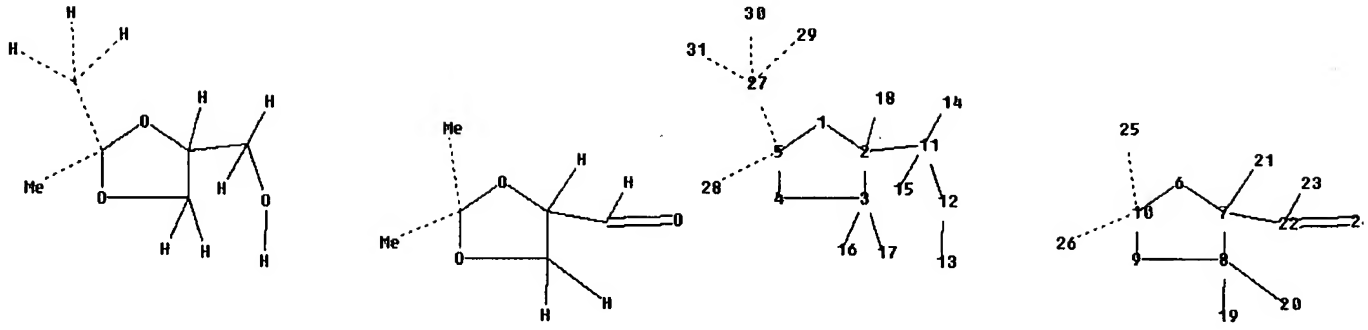

chain nodes :
11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

ring nodes :
1 2 3 4 5 6 7 8 9 10
chain bonds :
2-11 2-18 3-16 3-17 5-27 5-28 7-21 7-22 8-19 8-20 10-25 10-26 11-12
11-14 11-15 12-13 22-23 22-24 27-29 27-30 27-31
ring bonds :
1-2 1-5 2-3 3-4 4-5 6-7 6-10 7-8 8-9 9-10
exact/norm bonds :
1-2 1-5 2-3 3-4 4-5 5-27 5-28 6-7 6-10 7-8 8-9 9-10 10-25 10-26 11-12
22-24 27-29 27-30 27-31
exact bonds :
2-11 2-18 3-16 3-17 7-21 7-22 8-19 8-20 11-14 11-15 12-13 22-23

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS
21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS
29:CLASS 30:CLASS
31:CLASS
fragments assigned product role:
containing 6
fragments assigned reactant/reagent role:
containing 1
node mappings:
11:22

L3 10 SEA FILE=CASREACT SSS FUL L1 (11 REACTIONS)
L4 9 SEA FILE=CASREACT ABB=ON PLU=ON L3/COM
L8 1027 SEA FILE=CASREACT ABB=ON PLU=ON 2564-83-2
L9 128 SEA FILE=CASREACT ABB=ON PLU=ON 2226-96-2
L10 1 SEA FILE=CASREACT ABB=ON PLU=ON L4 (L) L8
L11 1 SEA FILE=CASREACT ABB=ON PLU=ON L4 (L) L9
L12 2 SEA FILE=CASREACT ABB=ON PLU=ON L10 OR L11

=> => file registry
FILE 'REGISTRY' ENTERED AT 13:13:51 ON 24 SEP 2007
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 SEP 2007 HIGHEST RN 947726-74-1
DICTIONARY FILE UPDATES: 23 SEP 2007 HIGHEST RN 947726-74-1

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> file zcaplus
FILE 'ZCAPLUS' ENTERED AT 13:13:54 ON 24 SEP 2007
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FILE COVERS 1907 - 24 Sep 2007 VOL 147 ISS 14
FILE LAST UPDATED: 23 Sep 2007 (20070923/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

=> d stat que L35
L5 26 SEA FILE=REGISTRY ABB=ON PLU=ON (100-79-8/RN OR 5736-03-8/RN OR 75-09-2/RN OR 121-44-8/RN OR 14347-78-5/RN OR 22323-80-4/RN OR 2564-83-2/RN OR 26299-14-9/RN OR 67-68-5/RN OR 7732-18-5/RN OR 79-37-8/RN OR 87-90-1/RN OR 110-86-1/RN OR 127-09-3/RN OR 1333-82-0/RN OR 1344-28-1/RN OR 144-55-8/RN OR 20667-12-3/RN OR 2226-96-2/RN OR 397863-03-5/RN OR 67-64-1/RN OR 75-05-8/RN OR 7647-01-0/RN OR 7647-15-6/RN OR 7664-93-9/RN OR 7681-52-9/RN)
L6 4 SEA FILE=REGISTRY ABB=ON PLU=ON NC5/ESS AND L5
L7 2 SEA FILE=REGISTRY ABB=ON PLU=ON L6 AND C>8
L14 5363 SEA FILE=ZCAPLUS ABB=ON PLU=ON L7
L15 5 SEA FILE=REGISTRY ABB=ON PLU=ON L5 AND OCOC2/ES

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L16         2139 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  L15
L17            3 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  L14 AND L16
L19            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "1,3-DIOXOLANE-4-CARBOXALDEHY
                 DE, 2,2-DIMETHYL-, (4S)-"/CN
L20            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "1,3-DIOXOLANE-4-CARBOXALDEHY
                 DE, 2,2-DIMETHYL-, (4R)-"/CN
L21            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "1,3-DIOXOLANE-4-CARBOXALDEHY
                 DE, 2,2-DIMETHYL-"/CN
L22         1317 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  (L19 OR L20 OR L21)
L23            4 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  L22 AND L7
L25            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  1,3-DIOXOLANE-4-METHANOL,
                 2,2-DIMETHYL-/CN
L26            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("1,3-DIOXOLANE-4-METHANOL,
                 2,2-DIMETHYL-, (4R)-"/CN OR "1,3-DIOXOLANE-4-METHANOL,
                 2,2-DIMETHYL-, (4S)-"/CN)
L27            3 SEA FILE=REGISTRY ABB=ON  PLU=ON  L25 OR L26
L28         1317 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  (L19 OR L20 OR L21)
L29         2192 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  L27
L30         5363 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  L7
L31            2 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  L28 AND L29 AND L30
L32            4 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  L17 OR L23 OR L31
L33            4 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  L28 AND L30
L34            3 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  L29 AND L30
L35            5 SEA FILE=ZCAPLUS ABB=ON  PLU=ON  (L32 OR L33 OR L34)


=> dup rem L12 L35
FILE 'CASREACT' ENTERED AT 13:14:14 ON 24 SEP 2007
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PROCESSING COMPLETED FOR L12
PROCESSING COMPLETED FOR L35
L36            5 DUP REM L12 L35 (2 DUPLICATES REMOVED)
                 ANSWERS '1-2' FROM FILE CASREACT
                 ANSWERS '3-5' FROM FILE ZCAPLUS

=> d ibib abs hit L36 1-2; d ibib abs hitstr L36 3-5


L36  ANSWER 1 OF 5  CASREACT  COPYRIGHT 2007 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         142:430492  CASREACT  Full-text
TITLE:                    Process for the preparation of glyceraldehyde
                          acetonide from solketal via oxidation reaction
INVENTOR(S):              Quaedflieg, Peter Jan Leonard Mario; Alsters, Paulus
                          Lambertus; Pojarliev, Peter; Jary, Walther Gunther
PATENT ASSIGNEE(S):       DSM IP Assets B.V., Neth.
SOURCE:                   PCT Int. Appl., 27 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
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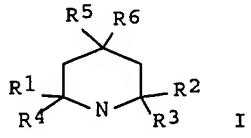
WO 2005040149 A1 20050506 WO 2004-EP12064 20041025
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
CA 2543303 A1 20050506 CA 2004-2543303 20041025
EP 1678158 A1 20060712 EP 2004-817268 20041025
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
CN 1875014 A 20061206 CN 2004-80031932 20041025
JP 2007522097 T 20070809 JP 2006-537158 20041025
IN 2006DN02387 A 20070803 IN 2006-DN2387 20060428
US 2007129553 A1 20070607 US 2006-576447 20060714
PRIORITY APPLN. INFO.: EP 2003-78392 20031028
WO 2004-EP12064 20041025

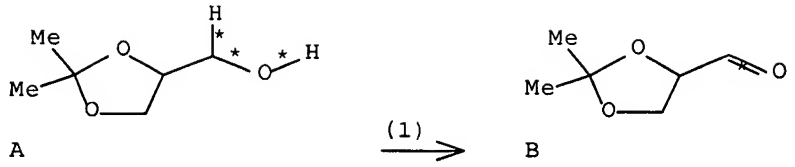
OTHER SOURCE(S): MARPAT 142:430492
GI



I

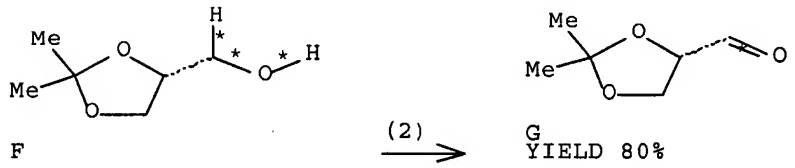
AB The invention relates to a process for the preparation of glyceraldehyde acetonide I, wherein R1-R4 are independently alkyl with 1 to 6 C-atoms and wherein R5 and R6 either both stand for H or an alkoxy group with 1 to 6 C-atoms or one stands for H and the other stands for an alkoxy group with 1 to 6 C-atoms, an alkylcarbonyloxy group with 1 to 6 C-atoms, an arylcarbonyloxy group with the carbonyloxy group having 1 to 6 C-atoms or an alkylcarbonylamino group with 1 to 6 C-atoms; or wherein R5 and R6 together stand for ketal groups, by oxidation of 2,2-dimethyl-1,3-dioxolane-4- methanol by an oxidizing agent, wherein the 2,2-dimethyl-1,3-dioxolane-4- methanol is oxidized by an organic N-chloro compound in the presence of an inert base and TEMPO or a TEMPO-derivative In one embodiment of the invention enantiomerically enriched glyceraldehyde acetonide is prepared from the corresponding enantiomerically enriched 2,2-dimethyl-1,3-dioxolane-4-methanol. Preferably, the organic N-chloro compound is trichloroisocyanuric acid or dichlorodimethyl hydantoin. Preferably, the inert base is sodium acetate or sodium bicarbonate. Thus, oxidation of (R)-solketal with trichloroisocyanuric acid in presence of TEMPO in acetone gave (S)-glyceraldehyde acetonide in 80% yield.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RX(1) OF 4 A ===> B



RX(1) RCT A *100-79-8*
RGT C 87-90-1 Isocyanuric chloride
PRO B *5736-03-8*
CAT *2564-83-2* Me4-piperidoxyl
SOL 75-05-8 MeCN
CON 30 minutes, room temperature
NTE optimization study, optimized on catalyst and oxidant

RX(2) OF 4 *F* ===> *G*...



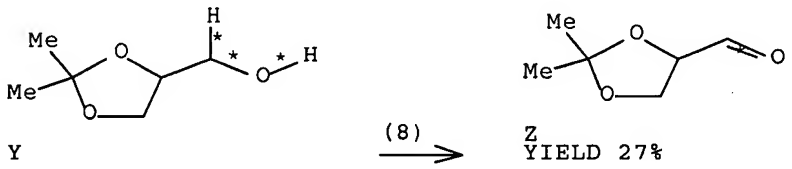
RX(2) RCT F *14347-78-5*
RGT C 87-90-1 Isocyanuric chloride, H 127-09-3 AcONa
PRO G *22323-80-4*
CAT *2564-83-2* Me4-piperidoxyl
SOL 67-64-1 Me2CO
CON SUBSTAGE(1) 25 deg C
SUBSTAGE(2) 8 minutes, 25 deg C -> 59 deg C
SUBSTAGE(3) 30 minutes
NTE optimization study, stereoselective

L36 ANSWER 2 OF 5 CASREACT COPYRIGHT 2007 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 143:349015 CASREACT Full-text
TITLE: Technical Production of Aldehydes by Continuous Bleach Oxidation of Alcohols Catalyzed by 4-Hydroxy-TEMPO
AUTHOR(S): Fritz-Langhals, Elke
CORPORATE SOURCE: Consortium fuer Elektrochemische Industrie GmbH, Wacker-Chemie GmbH, Munich, D-81379, Germany
SOURCE: Organic Process Research & Development (2005), 9(5), 577-582
CODEN: OPRDFK; ISSN: 1083-6160
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Aldehydes were easily prepared from the corresponding alcs. in good to excellent yields by oxidation with tech. bleach and catalytic amts. of 4-hydroxy-2,2,6,6-tetramethyl-piperidine-1-oxyl (4-hydroxy TEMPO, HOT). Whereas the well-known batch process performed on laboratory scale is not suitable for the tech. synthesis especially of activated β-substituted aldehydes, this transformation can be performed continuously in a simple tube reactor. This layout meets all requirements necessary for the process, i.e., turbulent mixing of the biphasic mixture, removal of heat, short contact times, and high output. Thus, a single tube of 3 mm diameter renders about 60 mol of aldehyde per day.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RX(8) OF 15 *Y* ===> *Z*



RX(8) RCT Y *100-79-8*

STAGE(1)
RGT L 144-55-8 NaHCO3
CAT *2226-96-2* 1-Piperidinyloxy, 4-hydroxy-2,2,6,6-tetramethyl-, 7647-15-6 NaBr
SOL 7732-18-5 Water, 75-09-2 CH2Cl2
CON 10 seconds, -10 deg C

STAGE(2)
RGT C 7681-52-9 NaOCl, D 7664-93-9 H2SO4
SOL 7732-18-5 Water
CON 3 minutes, pH 9.5

PRO Z *5736-03-8*

L36 ANSWER 3 OF 5 ZCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:538331 ZCAPLUS Full-text
DOCUMENT NUMBER: 145:27400
TITLE: Novel method for the preparation of aldehydes or ketones by TEMPO-catalyzed oxidation of primary or secondary alcohols
INVENTOR(S): Igi, Kimitaka; Hirata, Makoto; Mikami, Masafumi
PATENT ASSIGNEE(S): Daiso Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006122434	A1	20060608	US 2005-290474	20051201
US 7208634	B2	20070424		
JP 2006182764	A	20060713	JP 2005-339162	20051124
EP 1666441	A1	20060607	EP 2005-257406	20051201

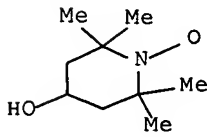
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU

PRIORITY APPLN. INFO.: JP 2004-350780 A 20041203
OTHER SOURCE(S): CASREACT 145:27400; MARPAT 145:27400

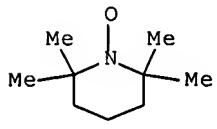
AB A method for preparing an aldehyde or ketone by oxidizing a primary or secondary alc. with a N-bromoamide compound or a combination of a N-chlorosuccinimide and a compound having bromide ion in the presence of a nitroxyl radical compound R0R1R2C-N(O)-CR0R3R4 [wherein R0 - R4 = alkyl; two R0 may link together to form a 5 to 7 membered ring with the nitrogen atom] is disclosed. For example, to a cooled suspension of 1-octanol (2.0 g), sodium bicarbonate (1.6 g) and TEMPO (24 mg) in dichloromethane (15 mL) was added NBS (3.0 g) in three portions at an ice bath. Usual workup and distillation gave 1-octanal in 88% yield. Alternatively, this reaction was carried out in the presence of catalytic amount of NaBr using 4-hydroxy TEMPO and NCS instead of TEMPO and NBS to afford 1-octanal in 85% yield.

IT *2226-96-2*, 4-Hydroxy TEMPO *2564-83-2*, TEMPO
RL: CAT (Catalyst use); USES (Uses)
(catalyst; preparation of aldehydes or ketones by TEMPO-catalyzed oxidation of primary or secondary alcs. with N-bromoamides or a combination of N-chlorosuccinimide and bromides)

RN 2226-96-2 ZCAPLUS
CN 1-Piperidinyloxy, 4-hydroxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



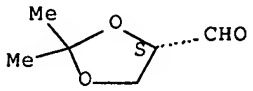
RN 2564-83-2 ZCAPLUS
CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT *22323-80-4*
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of aldehydes or ketones by TEMPO-catalyzed oxidation of

primary or
secondary alcs. with N-bromoamides or a combination of
N-chlorosuccinimide and bromides)
RN 22323-80-4 ZCAPLUS
CN 1,3-Dioxolane-4-carboxaldehyde, 2,2-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

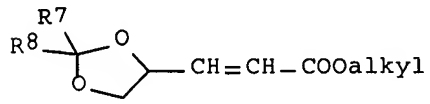


REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 4 OF 5 ZCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:562365 ZCAPLUS Full-text
DOCUMENT NUMBER: 145:62870
TITLE: Process for preparing α,β-unsaturated carboxylate esters
INVENTOR(S): Igi, Kimitaka; Hirata, Makoto; Mikami, Masafumi; Nagano, Yoshifumi
PATENT ASSIGNEE(S): Daiso Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1669353	A1	20060614	EP 2005-257405	20051201
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
JP 2006182763	A	20060713	JP 2005-339144	20051124
PRIORITY APPLN. INFO.:			JP 2004-350777 A	20041203

OTHER SOURCE(S): CASREACT 145:62870; MARPAT 145:62870
GI



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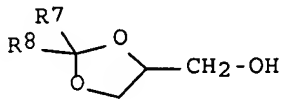
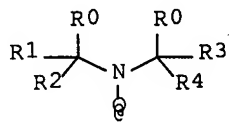


II



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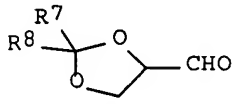


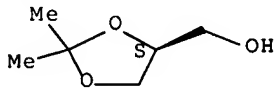
IV

AB A process for preparing an α,β-unsatd. ester [I; R7, R8 = H, C1-6 alkyl, Ph; e.g., (S)-3-(2,2-dimethyl-1,3-dioxolan-4-yl)-2-propenoic acid Me ester] comprises oxidizing a glycerol acetal derivative [II; e.g., (S)-glycerol acetonide] in the presence of a nitroxyl radical compound [III; R0-R4 = (un)branched alkyl; R0R0 = may form a ring; e.g., TEMPO] and a co-oxidant (e.g., diacetoxyiodobenzene) to prepare a glyceraldehyde (IV) and then reacting it with a phosphonoacetic acid alkyl ester (e.g., phosphonoacetic acid tri-Me ester) or a (triphenylphosphoranylidene)acetic acid alkyl ester to give I.

IT *22323-82-6*
RL: RCT (Reactant); RACT (Reactant or reagent)
(in a process for preparing α,β-unsatd. carboxylate esters)

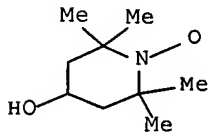
RN 22323-82-6 ZCAPLUS
CN 1,3-Dioxolane-4-methanol, 2,2-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

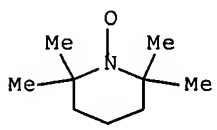


IT *2226-96-2 2564-83-2*, TEMPO
RL: RGT (Reagent); RACT (Reactant or reagent)
(in a process for preparing α,β-unsatd. carboxylate esters)

RN 2226-96-2 ZCAPLUS
CN 1-Piperidinyloxy, 4-hydroxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



RN 2564-83-2 ZCAPLUS
CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 5 OF 5 ZCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:719185 ZCAPLUS Full-text
DOCUMENT NUMBER: 139:7143

TITLE: A β-lactam route to short peptide segments related to angiotensin-converting enzyme (ACE) inhibitors

AUTHOR(S): Palomo, Claudio; Ganboa, Inaki; Oiarbide, Mikel; Sciano, Giuseppe Tomasi; Miranda, Jose I.

CORPORATE SOURCE: Dep. de Quim. Organica, Fac. de Quim., Univ. del Pais Vasco, San Sebastian, 20080, Spain

SOURCE: ARKIVOC (Gainesville, FL, United States) [online computer file] (2002), (5), 8-16
CODEN: AGFUAR
URL: http://www.arkat-usa.org/ark/journal/2002/MManas/MM-334C/MM-334C.pdf

PUBLISHER: Arkat USA Inc.

DOCUMENT TYPE: Journal; (online computer file)

LANGUAGE: English

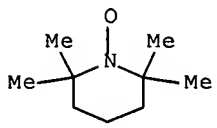
OTHER SOURCE(S): CASREACT 139:7143

AB The stereocontrolled synthesis of the Angiotensin Converting Enzyme (ACE) inhibitor enalapril is reported. The key transformation of the synthesis is a formal carboxylation of imines, which lies in the sequence: imine-ketene [2+2] cycloaddn. reaction, ring expansion of the resulting 3-hydroxy β-lactam to a N-carboxy α-amino acid anhydride (NCA), and final opening of the NCA with alcs.

IT *2564-83-2*
RL: CAT (Catalyst use); USES (Uses)
(stereocontrolled synthesis of enalapril via β-lactam route)

RN 2564-83-2 ZCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)

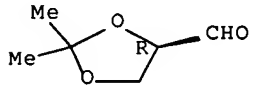


IT *15186-48-8*
RL: RCT (Reactant); RACT (Reactant or reagent)
(stereocontrolled synthesis of enalapril via β-lactam route)

RN 15186-48-8 ZCAPLUS

CN 1,3-Dioxolane-4-carboxaldehyde, 2,2-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> d his full

     (FILE 'HOME' ENTERED AT 12:46:02 ON 24 SEP 2007)

     FILE 'CASREACT' ENTERED AT 12:46:10 ON 24 SEP 2007
L1              STRUCTURE UPLOADED
L2            2 SEA SSS SAM L1 (     2 REACTIONS)
                D SCA
L3           10 SEA SSS FUL L1 (    11 REACTIONS)
L4            9 SEA ABB=ON  PLU=ON  L3/COM
                D SCA
                SAVE TEMP CHANDRL1/A L3
                SEL L4 RX

     FILE 'REGISTRY' ENTERED AT 12:49:59 ON 24 SEP 2007
L5           26 SEA ABB=ON  PLU=ON  (100-79-8/RN OR 5736-03-8/RN OR 75-09-2/RN
                OR 121-44-8/RN OR 14347-78-5/RN OR 22323-80-4/RN OR 2564-83-2/R
                N OR 26299-14-9/RN OR 67-68-5/RN OR 7732-18-5/RN OR 79-37-8/RN
                OR 87-90-1/RN OR 110-86-1/RN OR 127-09-3/RN OR 1333-82-0/RN OR
                1344-28-1/RN OR 144-55-8/RN OR 20667-12-3/RN OR 2226-96-2/RN
                OR 397863-03-5/RN OR 67-64-1/RN OR 75-05-8/RN OR 7647-01-0/RN
                OR 7647-15-6/RN OR 7664-93-9/RN OR 7681-52-9/RN)
L6            4 SEA ABB=ON  PLU=ON  NC5/ESS AND L5
                D SCA
L7            2 SEA ABB=ON  PLU=ON  L6 AND C>8
                D RN 1-2

     FILE 'CASREACT' ENTERED AT 12:52:11 ON 24 SEP 2007
L8         1027 SEA ABB=ON  PLU=ON  2564-83-2
L9          128 SEA ABB=ON  PLU=ON  2226-96-2
L10           1 SEA ABB=ON  PLU=ON  L4 (L) L8
L11           1 SEA ABB=ON  PLU=ON  L4 (L) L9
L12           2 SEA ABB=ON  PLU=ON  L10 OR L11
                D SCA

     FILE 'CASREACT' ENTERED AT 12:53:40 ON 24 SEP 2007
                D STAT QUE L12
                D IBIB ABS HIT L12 1-2

     FILE 'STNGUIDE' ENTERED AT 12:59:05 ON 24 SEP 2007

     FILE 'REGISTRY' ENTERED AT 13:01:38 ON 24 SEP 2007
L13       144050 SEA ABB=ON  PLU=ON  OCOC2/ES

     FILE 'ZCAPLUS' ENTERED AT 13:01:55 ON 24 SEP 2007
L14         5363 SEA ABB=ON  PLU=ON  L7

     FILE 'REGISTRY' ENTERED AT 13:02:51 ON 24 SEP 2007
L15           5 SEA ABB=ON  PLU=ON  L5 AND OCOC2/ES

     FILE 'ZCAPLUS' ENTERED AT 13:03:14 ON 24 SEP 2007
L16         2139 SEA ABB=ON  PLU=ON  L15
L17           3 SEA ABB=ON  PLU=ON  L14 AND L16
                D SCA

     FILE 'CASREACT, ZCAPLUS' ENTERED AT 13:06:09 ON 24 SEP 2007
L18           3 DUP REM L12 L17 (2 DUPLICATES REMOVED)
                    ANSWERS '1-2' FROM FILE CASREACT
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                    ANSWER '3' FROM FILE ZCAPLUS
               D IBIB ABS HITSTR L18 3

     FILE 'REGISTRY' ENTERED AT 13:08:44 ON 24 SEP 2007
               E "1,3-DIOXOLANE-4-CARBOXALDEHYDE, 2,2-DIMETHYL-, (4S)-"/CN
L19          1 SEA ABB=ON  PLU=ON  "1,3-DIOXOLANE-4-CARBOXALDEHYDE, 2,2-DIMETH
                YL-, (4S)-"/CN
L20          1 SEA ABB=ON  PLU=ON  "1,3-DIOXOLANE-4-CARBOXALDEHYDE, 2,2-DIMETH
                YL-, (4R)-"/CN
L21          1 SEA ABB=ON  PLU=ON  "1,3-DIOXOLANE-4-CARBOXALDEHYDE, 2,2-DIMETH
                YL-"/CN
               E "1,3-DIOXOLANE-4-CARBOXALDEHYDE, 2,2-DIMETHYL-"/CN

     FILE 'ZCAPLUS' ENTERED AT 13:09:59 ON 24 SEP 2007
L22       1317 SEA ABB=ON  PLU=ON  (L19 OR L20 OR L21)
L23          4 SEA ABB=ON  PLU=ON  L22 AND L7

     FILE 'REGISTRY' ENTERED AT 13:10:41 ON 24 SEP 2007
L24          3 SEA ABB=ON  PLU=ON  (L19 OR L20 OR L21)
               D SCA
               D SCA L15
               E 1,3-DIOXOLANE-4-METHANOL, 2,2-DIMETHYL-,/CN
               E 1,3-DIOXOLANE-4-METHANOL, 2,2-DIMETHYL-/CN
L25          1 SEA ABB=ON  PLU=ON  1,3-DIOXOLANE-4-METHANOL, 2,2-DIMETHYL-/CN

L26          2 SEA ABB=ON  PLU=ON  ("1,3-DIOXOLANE-4-METHANOL, 2,2-DIMETHYL-,
               (4R)-"/CN OR "1,3-DIOXOLANE-4-METHANOL, 2,2-DIMETHYL-,
               (4S)-"/CN)
L27          3 SEA ABB=ON  PLU=ON  L25 OR L26

     FILE 'ZCAPLUS' ENTERED AT 13:12:18 ON 24 SEP 2007
L28       1317 SEA ABB=ON  PLU=ON  (L19 OR L20 OR L21)
L29       2192 SEA ABB=ON  PLU=ON  L27
L30       5363 SEA ABB=ON  PLU=ON  L7
L31          2 SEA ABB=ON  PLU=ON  L28 AND L29 AND L30
L32          4 SEA ABB=ON  PLU=ON  L17 OR L23 OR L31
L33          4 SEA ABB=ON  PLU=ON  L28 AND L30
L34          3 SEA ABB=ON  PLU=ON  L29 AND L30
L35          5 SEA ABB=ON  PLU=ON  (L32 OR L33 OR L34)

     FILE 'REGISTRY' ENTERED AT 13:13:51 ON 24 SEP 2007

     FILE 'ZCAPLUS' ENTERED AT 13:13:54 ON 24 SEP 2007
               D STAT QUE L35

     FILE 'CASREACT, ZCAPLUS' ENTERED AT 13:14:14 ON 24 SEP 2007
L36          5 DUP REM L12 L35 (2 DUPLICATES REMOVED)
                    ANSWERS '1-2' FROM FILE CASREACT
                    ANSWERS '3-5' FROM FILE ZCAPLUS
               D IBIB ABS HIT L36 1-2
               D IBIB ABS HITSTR L36 3-5


     FILE HOME

     FILE CASREACT
     Copyright of the articles to which records in this database refer is
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     for records published or updated in Chemical Abstracts after December
     26, 1996), unless otherwise indicated in the original publications.
```

FILE CONTENT:1840 - 22 Sep 2007 VOL 147 ISS 14

New CAS Information Use Policies, enter HELP USAGETERMS for details.

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*                                                        *
*     CASREACT now has more than 12 million reactions    *
*                                                        *
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Some CASREACT records are derived from the ZIC/VINITI database (1974-1999) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 SEP 2007 HIGHEST RN 947726-74-1
DICTIONARY FILE UPDATES: 23 SEP 2007 HIGHEST RN 947726-74-1

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 21, 2007 (20070921/UP).

FILE ZCAPLUS

FILE COVERS 1907 - 24 Sep 2007 VOL 147 ISS 14
FILE LAST UPDATED: 23 Sep 2007 (20070923/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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